



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,075	02/03/2004	Hong-Jyh Li	2003 P 54557 US	1972
48154	7590	07/07/2005	EXAMINER	
SLATER & MATSIL LLP 17950 PRESTON ROAD SUITE 1000 DALLAS, TX 75252			MUNSON, GENE M	
			ART UNIT	PAPER NUMBER
			2811	

DATE MAILED: 07/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary	Application No. <u>10/771,075</u>	Applicant(s) <u>H. Li</u>	
	Examiner <u>G. Munson</u>	Art Unit <u>2811</u>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) _ is/are pending in the application. 1-6, 8-11, 37-53
- 4a) Of the above claim(s) _ is/are withdrawn from consideration.
- 5) ☒ Claim(s) _ is/are allowed. 1-6, 8-11, 37-40
- 6) ☒ Claim(s) _ is/are rejected. 41, 42, 44, 45, 47-53
- 7) ☒ Claim(s) _ is/are objected to. 43, 46
- 8) ☐ Claim(s) _ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/26/05</u> | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2811

Claims 48, 49, 52 and 53 are rejected under 35 U.S.C. 112, second and fourth paragraphs. In claims 48 and 49, “the thin insulating layer” has no antecedent; perhaps the dependence is wrong. Claim 52 contradicts claim 41 that there is a “metal gate.” Claim 53 does not further limit claim 41 that there is a “metal gate”, and so appears to be of identical scope.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 41, 42, 44, 45 and 47-53 are rejected under 35 U.S.C. 103 as unpatentable over Ohuchi and Cheng et al, considered together. See Figures 2-A, 17 of Ohuchi with nitrogen (claim 44) in the semiconductor substrate as the “doped” region and included in the “gate dielectric” film. Ohuchi shows a “gate” 27 that comprises “semiconductor” material polysilicon (claim 52). Moreover, “metal” (claims 41, 53) is a conventional conductive material to use for a gate, as shown by Cheng et al (column 3), which would have been obvious to use to achieve a conductive gate. Silicon-on-insulator (SOI) (claim 50) is conventional for a substrate as applicant would agree and as shown by Cheng et al (column 2), which would have been obvious to use to achieve a substrate with isolation. Silicon oxynitride (claim 49), as well silicon dioxide (claim 48), is a conventional insulating material to use in a gate dielectric, as shown by Cheng et al (column 2), which would have been obvious to use to achieve a gate dielectric.

The references are of record.

Art Unit: 2811

The arguments in the response, filed 26 April 2005, have been considered but are not wholly persuasive, as noted above.

Claims 1-6, 8-11 and 37-40 are allowed over the art of record. Also, claims 43 and 46 are objected to as dependent upon rejected claims but would be allowable if each were put in completed form as independent claims, including all limitations of claims 41-43; 41, 45, 46.

This action is **FINAL**.

This action is a **final rejection** and is intended to close the prosecution of this application. Applicant's reply under 37 CFR 1.113 to this action is limited either to an appeal to the Board of Patent Appeals and Interferences or to an amendment complying with the requirements set forth below.

If applicant should desire to appeal any rejection made by the examiner, a Notice of Appeal must be filed within the period for reply identifying the rejected claim or claims appealed. The Notice of Appeal must be accompanied by the required appeal fee of appropriate amount.

If applicant should desire to file an amendment, entry of a proposed amendment after final rejection cannot be made as a matter of right unless it merely cancels claims or complies with a formal requirement made earlier. Amendments touching the merits of the application which otherwise might not be proper may be admitted upon a showing a good and sufficient reasons why they are necessary and why they were not presented earlier.

A reply under 37 CFR 1.113 to a final rejection must include the appeal from, or cancellation of, each rejected claim. The filing, whichever is longer, of an amendment after final rejection, whether or not it is entered, does not stop the running of the statutory period for reply

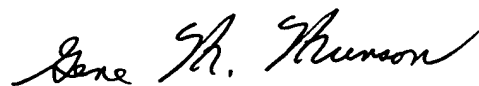
Art Unit: 2811

to the final rejection unless the examiner holds the claims to be in condition for allowance. Accordingly, if a Notice of Appeal has not been filed properly within the period for reply, or any extension of this period obtained under either 37 CFR 1.136(a) or (b), the application will become abandoned.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTH from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Munson
(571) 272-1659

7/05/05



**GENE M. MUNSON
EXAMINER
GROUP ART UNIT 2811**